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MEDICAL APPLIANCE DIVISION

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Cod. 3915

Operation and maintenance manual

STEAM STERILIZERS

MODELS

PRATIKA S16 PRATIKA B16-20

CE 0051

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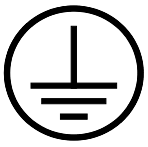
1. INTRODUCTION

The machine described in this operation and maintenance manual is a steam sterilizer that has been specially designed to sterilize most of the materials and instruments used in dental surgeries, doctors' surgeries and hospitals in general.

The machine can either operate at a temperature of 134°C and a pressure of 2.1 Bar or 121°C and a pressure of 1.1 Bar. These parameters are monitored and kept at constant levels by three mechanical and electronic devices that ensure an optimal sterilizing process along with total safety.

The operating cycles can be visually checked on a display installed on the control panel of the machine, or by means of a printer supplied on request.

The machine has been built so that the work cycle will automatically stop and the situation be indicated by an error message on the display if the operator fails to carry out the loading operations correctly or if a fault occurs on printer.

SYMBOLS AFFIXED TO THE MACHINE		**WARNING: IDENTIFIES A HEAT SOURCE. A PART COULD BE DANGEROUSLY HOT**
		WARNING: IDENTIFIES A GENERIC DANGER. THERE COULD BE A POTENTIALLY DANGEROUS CONDITION
		**IDENTIFIES THE GROUND CONDUCTOR**

Do not use the machine for purposes other than those for which it has been built.

To prevent the autoclave from being subjected to electrical disturbance, it is important to make sure that the earth resistance value is sufficient and well coordinated with the protections in your electrical system.

- **This symbol it means the product is covered by the European Directive 2002/96/EC.**
- **Please inform yourself about the local separate collection system for electrical products.**
- **Please act according to your local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environement and human healt.**

2. TECHNICAL SPECIFICATIONS

PRATIKA are autoclaves designed and built in compliance with the operators' need for functionality, practical use and safety.

Are fully automatic. All functions are electronically servo-assisted, so the operator knows what the machine is doing at any given moment.

Have functional characteristics that make them unique, i.e.:

AUTOMATIC POWERING, thanks to which the electric heating element maintains the chamber at a temperature of 80°C for up to 60 min., after which it will automatically switch off if not used, if the "night" program is selected.

- Gradual heating to obtain a more accurate temperature and a better sterilizing process.
- **AUTOMATIC WATER FILLING** by means of an electric pump.
- **AUTOMATIC AIR EXHAUST** to eliminate the air from inside the chamber at the beginning of the cycle, thus achieving the utmost steam saturation.
- **DOUBLE SAFETY VALVE** to prevent overpressures.
- **DRYING CYCLE** included: with thermodynamic system and vacuum pump
- **SAFETY THERMOSTAT** to prevent overtemperatures.
- Electronic **DISPLAY** for all functions, with message display and printout.
- Press-moulded seamless 18/10 **STAINLESS STEEL CHAMBER**.
- **16 l. CAPACITY** chamber which can be fitted with up to five trays.
- Riscaldamento graduale al fine di ottenere una temperatura più precisa e una migliore sterilizzazione.
- After each cycle, the **PRATIKA** autoclave, as required, triggers an anti-condensation system unless the door is opened within a few minutes.
- Incorporated **DRYING CYCLE:** with thermodynamic system and vacuum pump
- **POSSIBILITY OF CONNECTING THE DRAIN** to the sewage system or can provided.
- **POSSIBILITY OF CONNECTING UP** the water supply to our **WATER OK** treatment unit.

Description	Unit of measurement	Values
Power source voltage rating	V	230 V.a.c. ~
Power source frequency	Hz	50
Machine power rating	W	2300
Boiler volume	mm	Ø 240 x 340 | Ø 240 x 440 (B20)
Operating pressure	Bar	2.1 - 1.1
Machine dimensions X, Y, Z	mm	Prof. 540 x Larg. 480 x H 530
Gross weight	Kg	50
Pack dimensions	mm	Prof. 680 x Larg. 560 x H 670
Operating temperatures	°C	+ 3°C ..... + 35°C
Distance from walls	cm	8 - 10

X = depth Y = width Z = height

The electrical system is protected against the risk of over-currents installed inside the machine by two 15 A delayed action fuses (T 15 A).

The electronic control and powering boards protect the various users by means of 3 dedicated fuses: 2 quick-acting 1 A types (F 1 A) and one 100 mA delayed action type (T 100 mA) – (see enclosed wiring diagram).

Only have these fuses changed by a skilled electrician.

The noise level of the machine has been tested. The continuous equivalent weighted acoustic pressure level A is less than 70 dB (A) and the continuous equivalent weighted acoustic power level A does not exceed 85 dB (A). The measured noise level measured is therefore very low. For this reason, the operator need not take any particular measures (also in view of the fact that the machine operates automatically).

DATA AND SPECIFICATIONS OF THE PRESSURIZED VESSEL:

Serial N° of vessel, Serial N° of door	Month N°, Year N° (see internal label)
Max. operating pressure:	2.2 Bar
Max. operating temperature:	160°C
Min. operating pressure:	-0.9 Bar
Test pressure:	8 Bar
Reference standards:	TRD 421
Volume of vessel:	16 or 20l.

DATA AND SPECIFICATIONS OF THE PRESSURIZED VESSEL:

Serial N° of vessel, Serial N° of door	Month N°, Year N° (see internal label)
Max. operating pressure:	3 Bar.
Max. operating temperature:	160°C
Test pressure:	12 Bar.
Reference standards:	TRD 421
Volume of vessel:	1 lt.

3. GENERAL RECOMMENDATIONS

3.1 Regulations for the operator

- Always wear personal protective equipment in compliance with the directives that establish the current accident-preventing provisions.
- Do not approach the machine with inflammable materials.
- Do not carry out repairs or maintenance work whilst the machine is operating or plugged into the electricity main or when parts of it are hot.
- Only responsible adults may use the machine in places inaccessible to children.
- Use the machine in a dry place, sheltered from the rain.
- Periodically inspect the power cable to make sure that it is in a good condition.
- If there are several persons in the place of work, remember to keep at a safe distance from the machine to prevent accidental contact with hot parts.
- Never ever operate the appliance unless the power cable is in a perfect condition and the structure undamaged.
- It is advisable to keep the door half-open with switch (8) turned off in "0" position, when the appliance is not in use.
- It is advisable to nominate a person responsible for the autoclave, as established by directive 626/94.

Pay the utmost attention to those parts of the appliance that become hot during operation and that still remain hot after it has been switched off. Keep your face well away from the top part of the machine when the door is opened to prevent it from being scalded by steam. Keep about 50 cm. away from the machine when opening the door.

As specified in the technical specifications, these autoclaves operate at a pressure that can reach 2.2 Bar at most. Do not use the autoclave in an improper way and do not carry out maintenance operations while the sterilizing cycles are in progress. Remember that the pressure is shown by the pressure gauge installed on the front of the machine itself.

Wait at least 20 minutes after the appliance has been switched off, to allow the boiler to completely cool.

4. LOCATION OF THE CONTROLS

PRATIKA feature an elegant casing treated with scratch-proof epoxy powder paint in the **RAL 9010 COLOUR**. No particular preparations are required to operate the machines. Just fit the plug into a 230 V power socket.

CONTROL PANEL:

-1- INFO DISPLAY

-2- VALUE INCREASE / MENU'

-3- OK / ENTER

-4- VALUE DECREASE / MENU'

-5- FILL WATER / START-STOP CYCLE

-6- PRESSURE AND VACUUM GAUGE

-7- PRINTER CONNECTING SOCKET

-8- MAIN SWITCH

-9- DOOR OPENING LEVER

-10- WATER FILL UNION

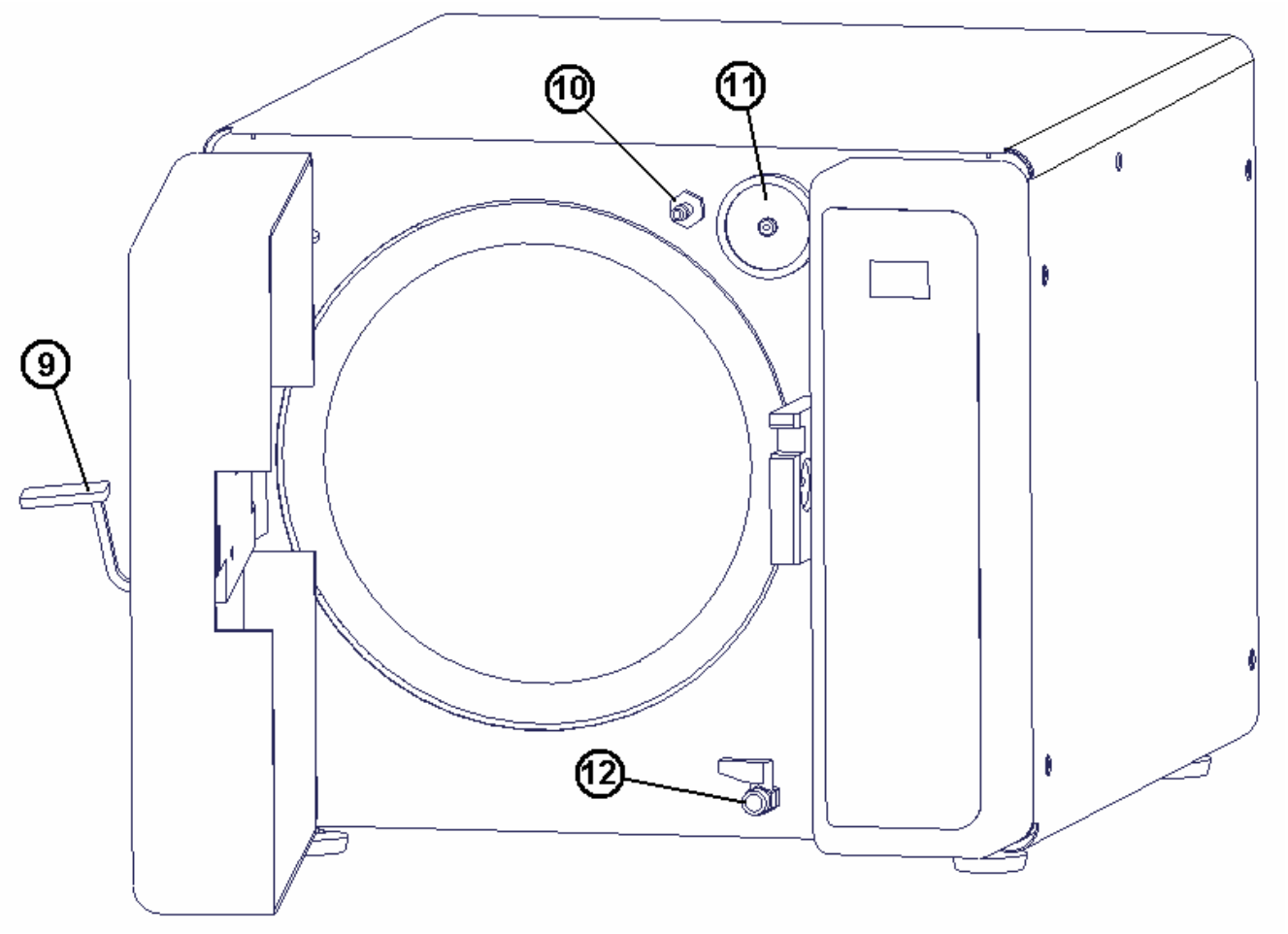
-11- BACTERIOLOGICAL FILTER

-12- WATER DRAIN UNION

-13- SD CARD

THE FOLLOWING ACCESSORIES ARE SUPPLIED:

1 TRAY HOLDER, 4 TRAYS, 1 TOOL TO TAKE OUT THE TRAYS AND ADJUST THE DOOR, 1 PIPE WITH FILTER FOR WATER FILLING, 1 WATER DRAIN PIPE, 1 TRANSPARENT ∅6 TUBE TO DRAIN WATER INTO THE CAN, 1 SPONGE, 1 INSTRUCTION MANUAL, 1 10 LITER CAN, 1 LIFTING HANDLE.



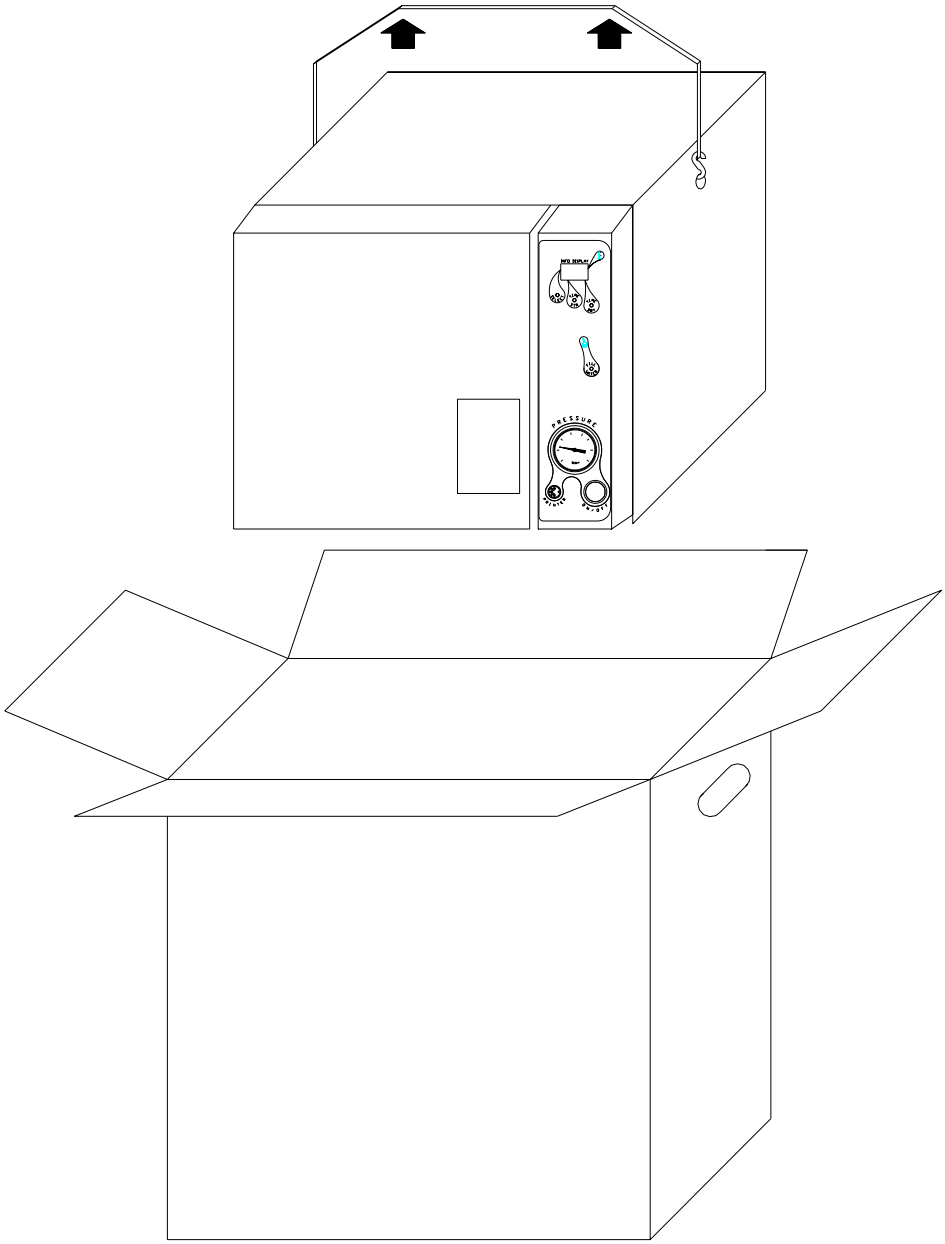
5. STARTING AND SETTING AT WORK

5.1 Removing the machine from the packing

The machine is consigned packed on a wooden pallet in a cardboard box: make sure that there are no dents and that the wrapping is in optimum conditions.
The machine must be stored in a dry place, sheltered from adverse weather conditions, at a temperature between +3°C and +35°C. The machine must be handled without jolting and using appropriate means.
Open the pack without overturning it. Remove the polystyrene from the top and sides (the weight of the model is given in chap. 2, technical specifications).
Lift the machine out of the box in a vertical direction using the 2 hooks supplied in the bag inside the pack. These should be inserted into the two holes at the sides of the casing (**see drawing on page 9**).
Remove the pluriball wrapping from around the machine and make sure that all parts of this latter are undamaged and complete with all the accessories indicated on the consignment note. Immediately notify our dealer if discrepancies are discovered.
Keep the packing materials for as long as the machine remains in use, not just for the warranty period. This is because the autoclave may need to be calibrated or regulated by the manufacturer's staff of by an after-sales center. Non-original packing is unable to ensure that the machine is correctly protected during transport.
The original packing comprises the following items:

- BIWALL BOX IN CARDBOARD WITH 3 CORRUGATIONS
- PLURIBALL POLYETHYLENE BAG
- SHAPED POLYSTYRENE FOAM
- PALLET INSIDE THE BOX

DRAWING ILLUSTRATING HOW THE MACHINE MUST BE LIFTED FROM THE PACK

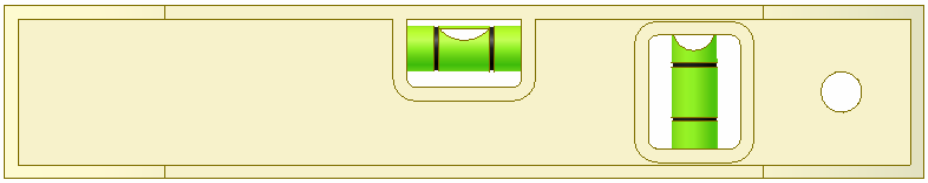


5.2 Installation and preliminary inspections

The installer is obliged to make sure that the place in which the sterilizer is installed is fit for that purpose (CEI 62/4).

Install the autoclave in a well ventilated place, well away from sinks, heat sources, grinders and from all other machines.
Comply with the following instructions to simply and efficiently check that the machine has been positioned correctly:
Fit the electric plug into a socket **WITH A CAPACITY OF AT LEAST 16 Ampere AND EQUIPPED WITH AN EARTH CONNECTION**. Make sure that the mains voltage rating corresponds to the value indicated on the label at the rear of the machine (230 Volts).**PRATIKA** must only be filled with **DISTILLED WATER** to ensure that the electrical and air-operated devices operate efficiently and are long lasting.

Never connect the plug of the machine to a reduction.
Use a bubble level to make sure that the surface on which the appliance is to be positioned is perfectly horizontal.

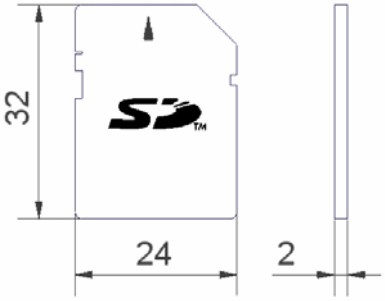


Fill out and send off the warranty form.

5.3 Using the sd card

DON'TS

- **Do not take the card out and put it back in place while the machine is running.**
- **Do not force the card in the wrong direction.**
- **Do not use cards with dimensions different to those illustrated.**

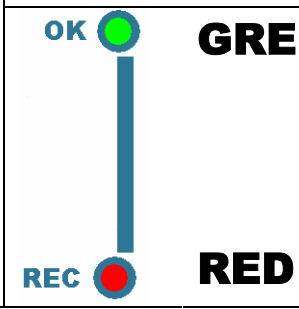


1) Insert the card with the door open.

2) When you insert the card, the red LED will flash just once.

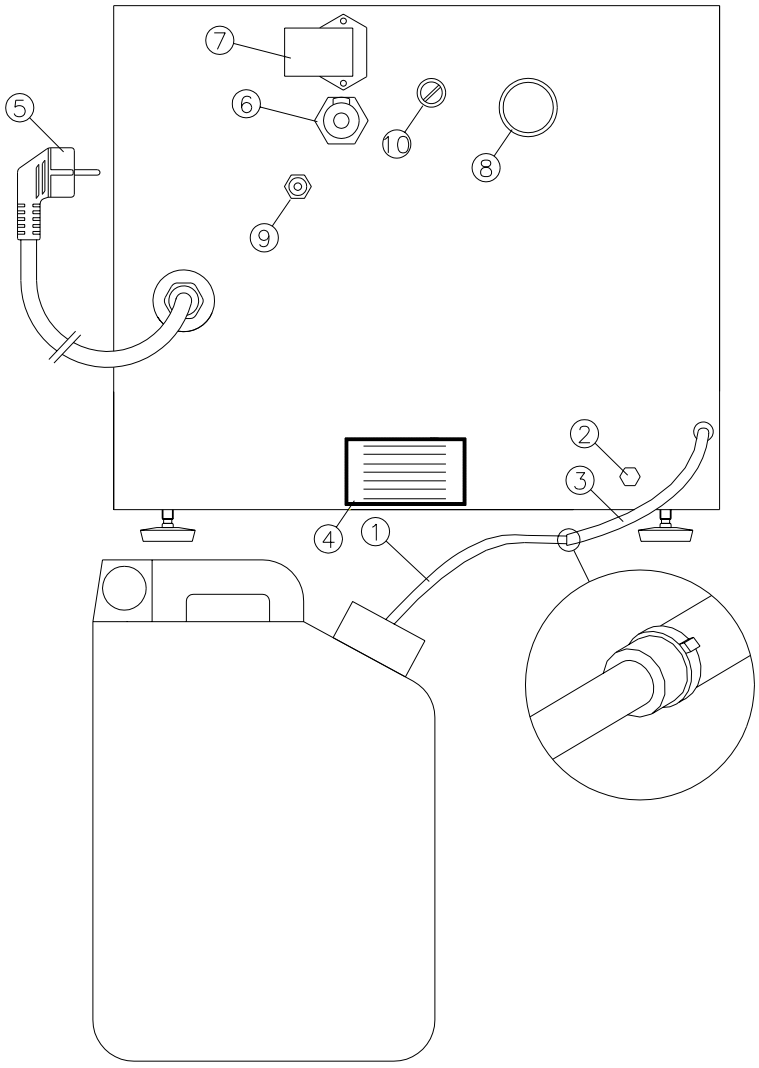
3) After this, the green LED will light up permanently. The card is ready to receive data from the machine.

4) The red LED will flash each time the machine transmits data to the card.



ANOMALY	CAUSE	SOLUTION
Green LED flashing	Card memory full. Card protected (lock).	Replace the card or download the data from the card to a computer. Disable the card protection (lock).
No LED lit.	The card is not inserted correctly. The built-in data transmission cable is faulty.	Insert the card correctly. Replace the built-in data transmission cable.

DESCRIPTION OF THE REAR PART



1) Can.
2) Generator drain.
3) Water drainpipe used for connecting to the can through "1". The same pipe can be used for draining into the sewage system.
4) Label showing the following data: Model, CE mark, power voltage and frequency, power input, serial number, year of manufacture, manufacturer's details.
5) Power cable with Shuko France plug.
6) Water connection point for treatment unit.
7) Power point for treatment unit.
8) Safety valve.
9) Safety boiler.
10) Safety dry.

LANGUAGE, DATE AND TIME SETTINGS:

With the door open and the machine on, scroll through the menu using key (2) or (4). Besides the sterilisation cycles, machine setting data can be displayed in succession (date, time, temperature in the chamber etc.). Enter the desired item and confirm with key (3). Change the figures with keys (2) and (4).
Once desired changes have been made, always confirm with key (3).

TABLE OF CYCLES END SERVICES:

Nr. Progressiv	Cycle or service
1	CYCLE FREE
2	CYCLE FREE
3	CYCLE 121° UNWRAPPED
4	CYCLE 121° WRAPPED
5	CYCLE 134° UNWRAPPED
6	CYCLE 134° WRAPPED
7	CYCLE 134° PRIONE
B & D TEST	BOWIE & DICK TEST
VACUUM T	VACUUM TEST
DRY FN	CYCLE DRY
FIALE	CYCLE PHIALE
TIME SET	TIME
DATE SET	DATE
WAKE UP	WAKE UP
PICCHI	PRE-VACUUM
NIGHT	CYCLE NIGHT S/N
PRINTER	PRINT S/N
LANGUAGE	LANGUAGE GB/F/D/E/I

READ OF INFO DISPLAY:

	3		**1**	**5**			**5**

3= Cycle number **15**= Sterilization time **5**= Dry time
121= Temperature of sterilization °C

	4		**2**	**0**		**1**	**5**

4= Cycle number **20**= Sterilization time **15**= Dry time
121= Temperature of sterilization °C

	5			**4**			**5**

5= Cycle number **4**= Sterilization time **5**= Dry time
134= Temperature of sterilization °C

	6		**1**	**0**		**1**	**5**

6= Cycle number **10**= Sterilization time **15**= Dry time
134= Temperature of sterilization °C

	7		**1**	**8**		**2**	**0**

7= Cycle number **15**= Sterilization time **5**= Dry time
134= Temperature of sterilization °C

B	**&**	**D**		**T**	**E**	**S**	**T**

BOWIE & DICK TEST not for instruments
134= Temperature of sterilization °C

V	**A**	**C**	**U**	**U**	**M**		**T**

VACUUM TEST

	D	**R**	**Y**		**F**	**N**	

ADDITIONAL DRY
110= Temperature of sterilization °C

	B	**O**	**T**	**T**	**L**	**E**	

PHIAL CYCLE
54= Temperature of sterilization °C for 48 hour

T	**I**	**M**	**E**		**S**	**E**	**T**

TIME SET

D	**A**	**T**	**E**		**S**	**E**	**T**

DATE SET

W	**A**	**K**	**E**		**U**	**P**	

DELAYED STARTING for next 24 h

	P	**E**	**A**	**K**	**S**		

Number of vacuum peaks (max. 3). Only for cycle **1** or **2**

N	**I**	**G**	**H**	**T**		**F**	**N**
Y	**E**	**S**	**/**	**N**	**O**		

NIGHT CYCLE
YES= Active **NO**= Inactive

P	**R**	**I**	**N**	**T**	**E**	**R**	
Y	**E**	**S**	**/**	**N**	**O**		

PRINTER SELECTION
YES= Active **NO**= Inactive

L	**A**	**N**	**G**	**U**	**A**	**G**	**E**

LANGUAGE SELECTION

N	**.**	**C**	**Y**	**C**	**L**	**E**	**S**

NUMBER OF CYCLES

L	**I**	**Q**	**U**	**I**	**D**		
Y	**E**	**S**	**/**	**N**	**O**		

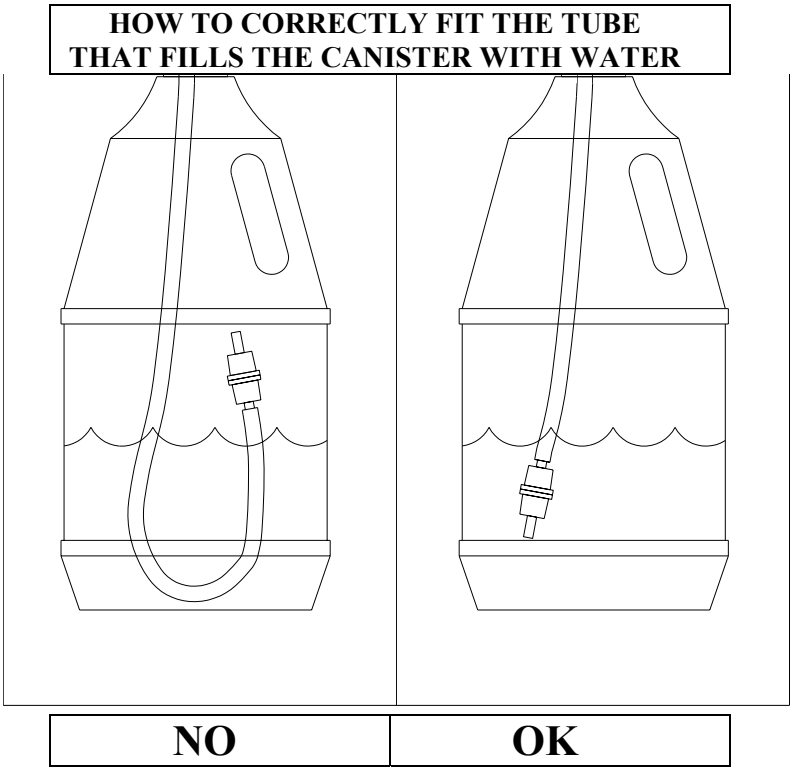
CYCLE FOR LIQUID STERILIZATION
YES= Active **NO**= Inactive

6. GENERAL INSTRUCTIONS FOR USE

6.1 Directions for use

OPEN DOOR WITH SWITCH (9) TURNED.

- Remove the tray holder pack from the chamber.
- Switch on the master switch (8).
- The display unit will indicate lack of water with the message NO WATER IN TANK.
- Connect the pipe to the pipe connection (10) and place the other end of the pipe in the distilled-water can.



- Press the button (5) to start the water supply pump, which will stop automatically when the water tank has reached maximum level.
- The display unit will show the number of the previously performed cycle.
- If a different cycle to that shown on the display unit (1) is to be performed, press button (2) or (4) to scroll the menu.
- For a customised ("special") cycle, select cycles number one or two. Once a "special" cycle has been selected, press key (3) to change the settings made. It is possible to change the sterilisation time, the drying time, the sterilisation temperature and the minimum vacuum value of the vacuum peaks. The settings can be changed using keys (2) and (4) before confirming with key (3). As regards the number of pre-vacuum peaks, enter from the main menu at the PEAKS item and set the desired figure, changing the setting with keys (2) and (3) and confirming with key (3). The number of peaks only concerns cycles one and two (“special”).
- Refer to the cycle table on page 15.
- After terminating the settings on the display unit (1), introduce the tray holder into the chamber with the load to be sterilised.
- To start the cycle, close the door with the handle (9).
- Press key (5) to start the cycle.
- The end of the cycle is indicated by a message on the display unit (1).

6.2 How to drain the water from the tanks

- Chek the tank level (used water) bifore each cycle.
- In case the level is nearly full, please beh ave as follows:
- Unscrew the plug of the tank.
- Empty the tank in drainage and rinse with care.
- Screw the plug of the tank (make attentino to not twist the discharge tube and be sure that the tank is in stable position.

6.3 End of work

At the end of the operations, open the door and position the green master switch (8) on OFF.

Pay particular attention to the temperature of the various components when you switch off the machine.
Wait a few minutes to allow the components to cool.

7. HOW TO ARRANGE THE INSTRUMENTS FOR THE STERILIZING PROCESS

Before being sterilized, the instruments must be cleaned to remove blood residues, incrustations, foreign bodies, etc. These impurities can damage the items being sterilized, the autoclave components and prevent the sterilizing process from being correctly carried out.

These instruments must be made of NON-ferrous material since they could damage or oxidize the other instruments or the autoclave itself.

To achieve perfect sterilizing, it is therefore important to proceed in the following way:

1. Rinse and brush the instruments under running water immediately after use to remove all deposits.
2. Place the instruments in the ultrasound machine with distilled water and detergent solution if possible.
3. Thoroughly rinse the instruments in demineralised water to prevent scaling stains.
4. Dry the instruments to eliminate all water residues which could lead to oxidation.
5. Wash, rinse and dry the supplied trays and make sure that they are perfectly clean.
6. To ensure that packaged instruments are perfectly dried, we recommend use of support art. M9050 supplied as an optional.
7. If loose instruments must be sterilized, it is advisable to cover the trays with a paper or fabric napkin to prevent direct contact with the tray surface: do not place the instruments straight on to the trays.
8. Scissors and forceps should be slightly opened. Mirrors and containers should be placed upside down for the sterilizing process.
9. It is advisable to keep the instruments separated from each other to achieve a better sterilizing action. Overloading will impair the sterilizing process.
10. If packaged instruments must be sterilized on the trays, place the packets with their transparent side downwards and do not overlap. The packets should not be too large. Drying will be difficult if their edges overlap.
11. The machine can operate with a maximum 3 Kg load.

Sterilizing handpieces:

- Carefully read the handpiece operation manual with particular attention to the part about sterilizing (121°).
- Wrap the handpiece in the special sterilizing cloth.
- Place the wrapped handpiece on a NON-perforated tray to prevent spilt lubricating oil from polluting the pipes of the autoclave.
- Proceed with a short cycle 121°C sterilizing program.
- Remember to immediately remove the handpiece from the autoclave at the end of the sterilizing process.

For a valid sterilizing process, it is obligatory to add a chemical indicator for each cycle.

7.1 Sterilizing table

CYCLES FREE	*STERILIZING TIME (Min.)*	*DRYING TIME (Min.)*	*Nr. PICCHI*
1	*	*	1-3
2	*	*	

CYCLES AT 121°	*STERILIZING TIME (Min.)*	*DRYING TIME (Min.)*	*Nr. PICCHI*
3 UNWRAPPED	15	5	1
4 WRAPPED	20	15	

CYCLES AT 134°	*STERILIZING TIME (Min.)*	*DRYING TIME (Min.)*	*Nr. PICCHI*
5 UNWRAPPED	4	5	1
6 WRAPPED	10	15	
7 PRIONE	18	20	

TEST	*STERILIZING TIME (Min.)*	*DRYING TIME (Min.)*	*Nr. PICCHI*
BOWIE & DICK*	3,5	2	1
Vacuum**	15 (Total length of test)		

CYCLE PHIAL	*STERILIZING TIME (Min.)*	*DRYING TIME (Min.)*
54°	48h (Total length of test)	

* Preset value. ** To execute with cold machine.

7.2 Notes and warnings

1- Strictly comply with the manufacturer's instructions when sterilizing materials.
2- To preserve packaged and loose sterilized materials, the trays must be stored in special cabinets fitted with ultraviolet lamps and designed for this specific use.
3- If the articles are to be stored for a longer period, it is advisable to use our covered trays code 1474 + 2682 and tray holders code 2631 supplied on request.
4- Whenever a sterilizing process is carried out, it is advisable to add a chemical indicator that we can supply on request, code 1468.

5- It is advisable to purchase a printer with date stamp code M 9003 to file and record the sterilizing cycles and any faults that may have occurred.

6 - There must always be trays and tray-holders in the chamber. Without these accessories, abnormal pressures and temperatures could develop inside and these could cause the cycle to abort.

7 - It is advisable to place a phial containing culture spores in the chamber along with each load sterilized in order to make sure that the sterilizing process is valid.

8 - When packeted materials are sterilized, it is very important to use support art. M9050. This support can hold up to 20 packets (max. 3 instruments per packet). To use this accessory, it is essential to remove the support and all trays from the chamber. The non-perforated tray may only be used to sterilize turbines (handpieces) to prevent lubricant from being spread around the chamber. Only use perforated trays to sterilize packeted instruments and always remove non-perforated ones from the chamber. If the packets are not perfectly dry at the end of the sterilizing process, proceed with the supplementary drying cycle with cycle (1-2) "special".

7.3 Monthly inspection proposal

Fac simile of an inspection form

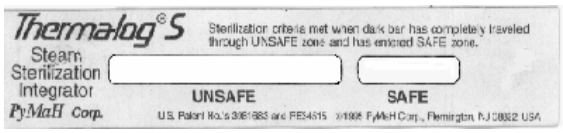
Sterilizer data			
Brand	Model	Year of purchase	Observations

Periodical internal inspection

	Date	Cycle length on display	Cycle temperature	Cycle temperature
EXAMPLE	07/11/2000	20'	134°	***VAPOR LINE***

The utilized indicator is enclosed for each inspection.

Always use biological indicators. 3 types of integrator are indicated as an alternative.

	VAPOR LINE (COD. 1468)	***THERMALOG S***	***HELIX TEST**** (COD.3369)
ORIGINAL			
VEER			

8. MESSAGES DISPLAYED

8.1 Alarm management

MESSAGE	ERROR TYPE	REMEDY
FAILED	Cycle not terminated	Check presence of any leaks in the hydraulic circuit, in the door seal (adjustment), solenoid valve N.O.
NO POWER	No mains power	Fit the machine plug in a single socket that complies with standards and is without adapters or extensions. Change the fuse and check the causes. Make sure the master switch (8) is not turned off with closed door.
NO WATER IN TANK	Not enough clean water in load tank	Fill up
BOILER	Boiler level error	Steam generator level probe cleaning
HIGH	High temperature	Check generator solenoid valve and temperature probe cable (PT100)
LOW	Low temperature	Check solenoid valve, thermostat and heating element of generator. Clean the generator probe.
VACUUM	Vacuum error	Check the vacuum pump and the relevant solenoid valve. Check the vacuum values on the display unit and on the pressure gauge.
MAX TEMP.	High boiler pressure	Check the temperature probe (PT100) and cable or detached cable.
PRESS. ERR.	Pressure error	Perform the vacuum test and check for any leaks. Check for any transducer malfunctions.
U.FULL	Used water tank full.	In case of connection, empty the tank

To reset the machine, turn the switch (8) off and on.

8.2 Operating messages

MESSAGE	OPERATION IN PROGRESS
Vac. test	Check hydraulic circuit for leaks
Phials	Pre-sterilised phial culture cycle
Print.	Start print
No cycle	Maintenance of instrumental drying
Hr. set	Time set
Start time	Start delayed up to 24 hours
Peaks	Vacuum, pressurisation, release
no. cycles	No. of cycle performed by machine
Italian	Current language (set)
End	Cycle finished
Liquid	Liquid sterilisation (gradual drain)

8.3 Printed Messages

MESSAGE	OPERATION
Ster. time	Sterilisation time
Type of cycle	Cycle type
Ster. time	Sterilisation time
Min.	Cycle min.
Sec.	Cycle sec.
Hrs	Cycle hrs.
C	Degrees centigrade
Sterilisation	Sterilisation phase
Pressurisation	Steam injection
Drying	Drying stage
End	End of cycle
Total time	Total cycle time
Test	Test cycle
Release	Steam release
Stopped	Cycle stopped by operator

9. MAINTENANCE

Carry out the maintenance operations with the machine at a standstill, after having removed the plug from the power socket and after having allowed the components to cool down.
The declaration of conformity to the standards in force is not valid unless the maintenance operations described below are carried out.

9.1 General maintenance (ALSO OPERATOR)

The machine needs to be serviced in a particular way. Users are therefore advised to comply with the below listed recommendations:

- Periodically check the condition of the electrical system with particular attention to the connection cable. **Contact our Technical Assistance Service or specialized personnel if faults are discovered.**
- Periodically clean the door, the seal and take particular care when cleaning the **internal part of the boiler**, removing any scaling with the damp sponge (supplied with the machine). Correct cleaning of these parts of the machine will ensure that the sterilizing cycle takes place in the right way.
- If the machine is not to be used for a long period of time, leave the door ajar and store it at a room temperature of >8°C.
- Use a damp cloth to clean the casing of the machine. Never ever use inflammable liquids for any reason whatsoever.
- The bacteriological filter must be changed at least once a year. New ones can be ordered with code 1067.

9.2 Daily routine maintenance (ALSO OPERATOR)

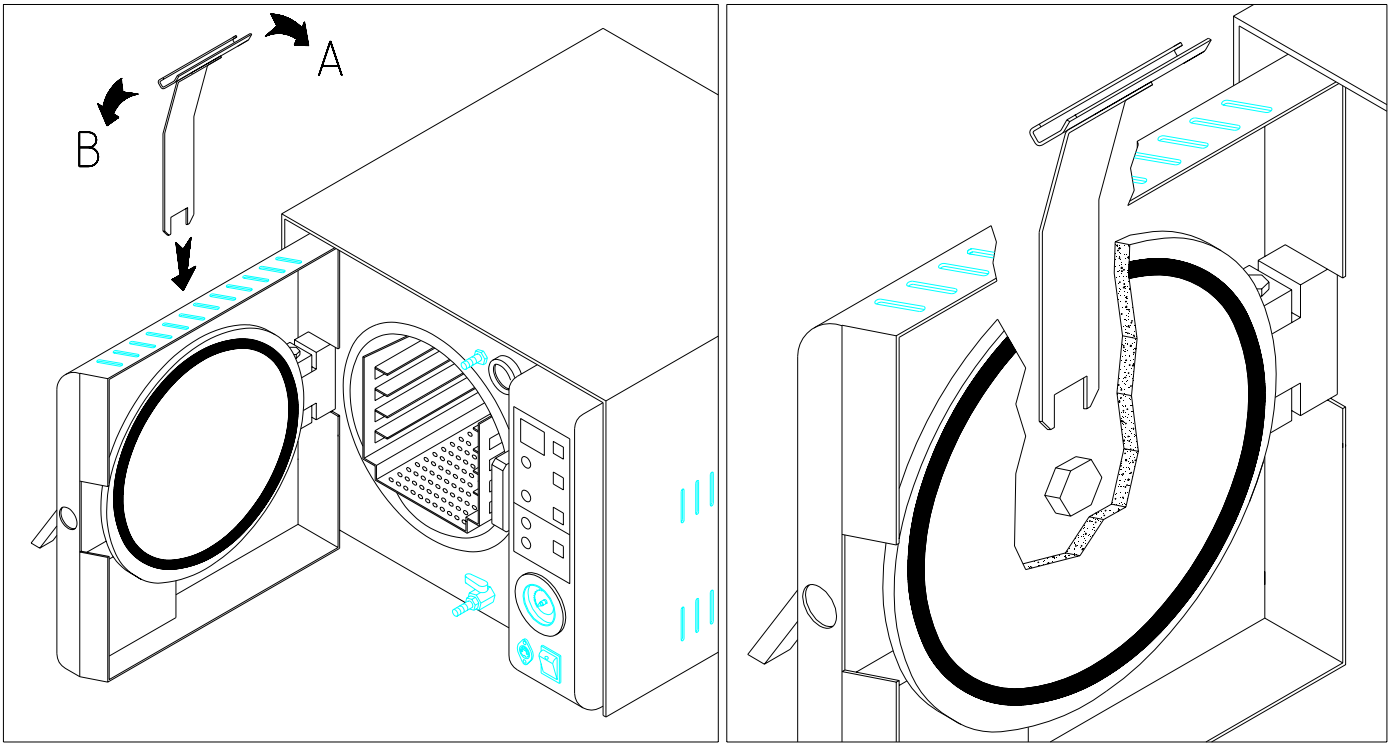
Clear the door seal, door window and generally clean the outer and inner surfaces of the machine.
Clean the black silicone door seal, the outer and inner edges and the part where the door rests on the sterilizing chamber and on which the seal must tightly fit. Use the supplied sponge to do this. The soft part of the sponge can be used to clean the seal while the rough part can be used to clean the edge of the chamber.
This cleaning operation must be carried out regularly to remove all impurities that could lead to loss of pressure inside the sterilizing chamber.
Check the used water level and drain off the actual water into the sewer if necessary. Then wash out the can under running water.
Check the level in the used water can

9.3 Weekly routine maintenance (ALSO OPERATOR)

Cleaning the sterilizing chamber (cleaning the trays and tray holders.
As specified in section 9.1 " General maintenance ", all traces of deposits must be removed from the bottom of the chamber. Use the rough side of the supplied sponge for this operation, attempting to eliminate any scaling that may have formed.
Rinse everything with the same water used for the sterilizing process. The trays and tray-holders must also be cleaned in this way.

9.4 Monthly routine maintenance (ALSO OPERATOR)

Lubricate the pins and locking mechanisms.
Check the movement of the hinge and door locking pin. Lubricate with Vaseline oil.
Make sure that the door is well regulated. If it is excessively slack, it must be adjusted by means of the supplied wrench. Turn the regulator at the rear of the door in a (A) direction. This will increase the pressure exercised by the seal.
Attempt to shut the door. If some difficulty is encountered, turn the regulator in an (B) direction with the supplied wrench.
Clean the entire autoclave cabinet with a slightly damp sponge, including the door casing.
Check and/or replace bacteriological filter Code. 1067 once a year.



9.5 Periodic extraordinary maintenance (ONLY FOR TECHNICIANS)

To allow the autoclave to operate in a regular way, the manufacturer advises users to carry out a functional test to ensure that the temperature and pressure parameters of the machine comply with the standards required for a correct sterilizing process.
These tests must be conducted by personnel authorized by the manufacturer, using calibrated and periodically certified instruments.
The autoclave can also be sent to the manufacturer for this test, after form 32/A has been filled out and accepted.
The autoclave is able to accept probes for the sterilizing tests.
It is advisable to have the appliance subjected to a Total Overhaul by After-sales Service staff at least once every 12 months.
The operation of the safety valve installed at the rear of the machine must also be checked at least once every 12 months. This is done by removing the protective casing and re-tightening the ring nut of the valve by hand. To prevent accidents, this operation should obviously be carried out when the machine is cold and off.

9.6 Recommended inspections and replacements (after about 1000 cycles) (ONLY FOR TECHNICIANS)

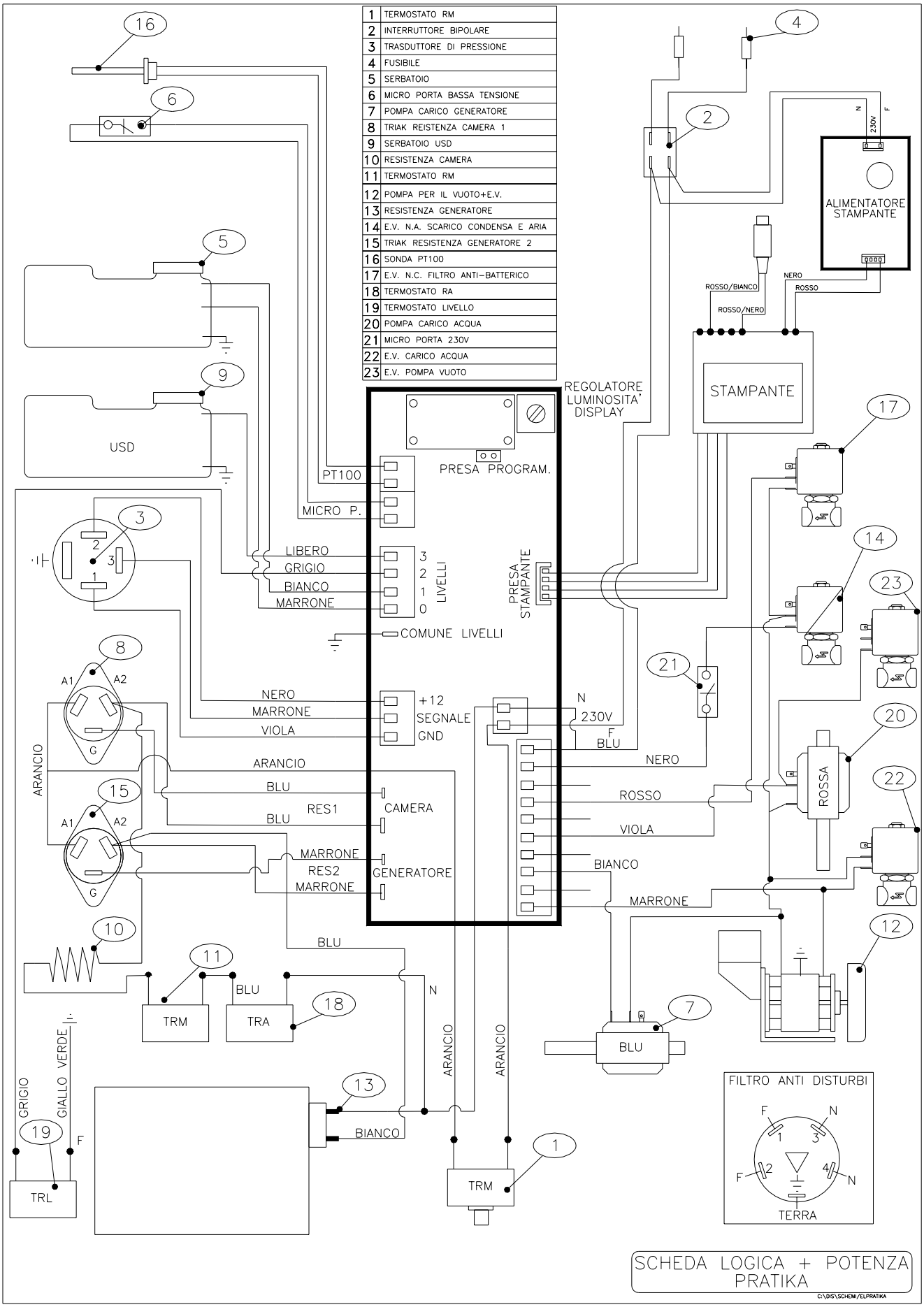
1) Make sure that the safety valve functions correctly.
- Remove the protective casing
- Carry out the 134° cycle and when the maximum pressure has been reached (2.2 bar), unscrew and retighten the knurled ring nut on the safety valve.
- Check to make sure that steam issues by unscrewing the ring nut and, vice versa, that total retention is achieved by tightening the same knurled ring nut again.
2) Replace the bacteriological filter
3) Clean and inspect the sterilizing chamber (there must be no trace of scaling or coloured tarnishing)
4) Make sure that the cock (14) is not clogged by blowing through it with a little compressed air.
5) Check the condition of the door seal (change it if it is cut or torn).
6) Make sure that the micro and micro-pressing system allows the door to close correctly. Lubricate with a silicone spray.
7) Replace the filter on the water fill line.
8)Remove and clean the steam generator level probe.
9) Replace the N.C. solenoid valve of the steam generator code 3028.
10) Replace the steam generator load pump code 3712.

Intervention date……signature of the authorized technician……
N.B. to send back as photocopy if the building factory required it.

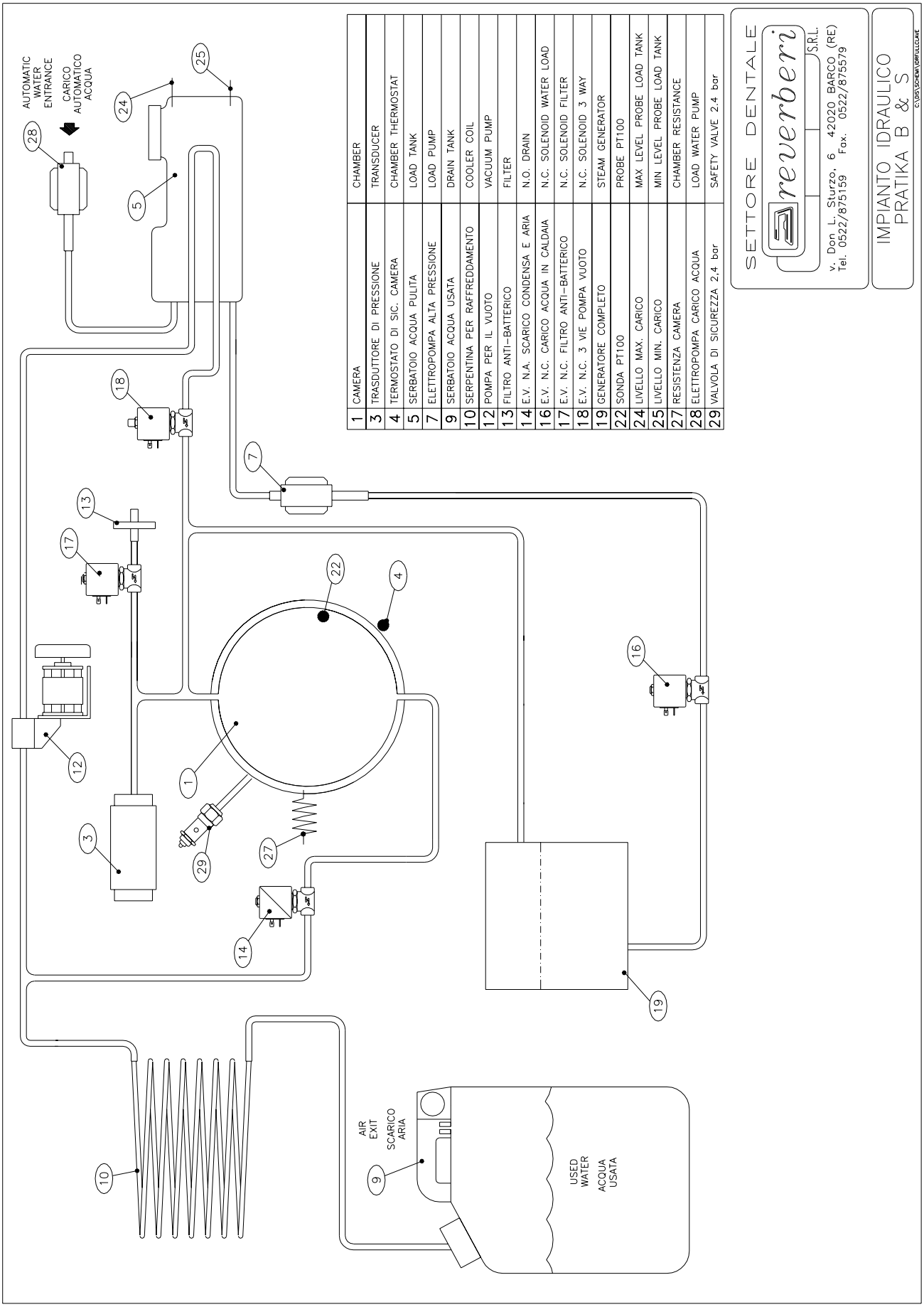
9.7 Corrective actions to prevent faults

1) Change the water inlet filter (internal) code 1484.
2) Clean the "Y" shaped filter (if installed) code 3136, and replace its seal, code 3188.
3) Check the quality of the distilled water using the relative instrument (from 0 to 20 mSiemens).
4) Replace the diaphragm and head seal of the vacuum pump (specify the model or serial number of the machine).
5) Replace the N.O. solenoid valve or coil, code 1015.
6) Before closing up the machine, generally inspect the internal components to make sure that they are in a good condition.
7) After these operations have been carried out, print out the report on the first cycles to make sure that the sterilizer operates in a normally efficient way.
8) Check the temperature and pressure in the chamber with a special “logger” type instrument.

ELECTRICAL SYSTEM PRATIKA:



HYDRAULIC CIRCUIT PRATIKA:



	CHAMBER
1	CAMERA
3	TRASDUTTORE DI PRESSIONE
4	TERMOSTATO DI SIC. CAMERA
5	SERBATOIO ACQUA PULITA
7	ELETTROPOMPA ALTA PRESSIONE
9	SERBATOIO ACQUA USATA
10	SERPENTINA PER RAFFREDDAMENTO
12	POMPA PER IL VUOTO
13	FILTRO ANTI-BATTERICO
14	E.V. N.A. SCARICO CONDENSA E ARIA
16	E.V. N.C. CARICO ACQUA IN CALDAIA
17	E.V. N.C. FILTRO ANTI-BATTERICO
18	E.V. N.C. 3 VIE POMPA VUOTO
19	GENERATORE COMPLETO
22	SONDA PT100
24	LIVELLO MAX. CARICO
25	LIVELLO MIN. CARICO
27	RESISTENZA CAMERA
28	ELETTROPOMPA CARICO ACQUA
29	VALVOLA DI SICUREZZA 2,4 bar

	CHAMBER
1	CHAMBER
3	TRANSDUCER
4	CHAMBER THERMOSTAT
5	LOAD TANK
7	LOAD PUMP
9	DRAIN TANK
10	COOLER COIL
12	VACUUM PUMP
13	FILTER
14	N.O. DRAIN
16	N.C. SOLENOID WATER LOAD
17	N.C. SOLENOID FILTER
18	N.C. SOLENOID 3 WAY
19	STEAM GENERATOR
22	PROBE PT100
24	MAX LEVEL PROBE LOAD TANK
25	MIN LEVEL PROBE LOAD TANK
27	CHAMBER RESISTANCE
28	LOAD WATER PUMP
29	SAFETY VALVE 2,4 bar

reverberi Via Don Luigi Sturzo n°6 42021 BARCO (Reggio Emilia) ITALY Tel. 0039 (0)522 / 875159 Fax 0039 (0)522 / 875579	**FORM TO FILL OUT WHEN APPLIANCES ARE RETURNED FOR REPAIRS**	To be filled out by the: Installer or authorized person

Autoclave mod..... Serial N° .....

At .....

Situated in .....address.....

Purchase invoice N° ..... of .....

Issued by Company .....

Date of first installation ..... by Mr. .....

Was the warranty form sent to the manufacturer when appliance was first installed? ❑ yes ❑ no

Reason why the machine must be sent back to the Manufacturer:

PERIODIC CALIBRATION ❑ REQUEST FOR REPAIR UNDER GUARANTEE ❑

REPAIR SUBJECT TO PAYMENT ❑ OTHER..... ❑

FAULT ENCOUNTERED: Which message appears on the display? .....

.....

.....

.....

.....

.....

BEFORE SENDING BACK THE AUTOCLAVE, PLEASE COMPLY WITH THE FOLLOWING INSTRUCTIONS:

1. Before sending back the machine, fill out this form and send it via fax to N° 0039 0522 875579 and send us free of charges. In case of non accepted repair estimate, will be invoiced € 50,00. ❑
2. The warranty will become void if the machine is sent back without prior authorization. ❑
3. If possible, allow the machine to operate until the minimum level Led comes on. ❑
4. Empty the used water from the tank. ❑
5. Place a folded piece of newspaper between the door and chamber and then shut the autoclave to prevent one of the two parts from being damaged during transport. ❑
6. Remove the tray-holder. Do not send it back with the machine. ❑
7. Send the autoclave packed in the original wrapping in which it was purchased. ❑
8. Install the substitute machine (if applicable) in compliance with the recommendations in the maintenance manual. ❑

The installer hereby declares that the indicated operations have been carried out, that the machine supplied as a substitute has been installed in compliance with the instructions in the maintenance manual and that it functions perfectly. The technician also declares that the form with the test results of the first installation has been filled out and sent off along with the warranty form.

Date ..... Installer's signature .....

It is obligatory for the installer to fill out all parts of this form and to declare that he has complied with all the conditions ensuring that the appliance is correctly installed in compliance with sect. 5.2 of the instruction manual.

The installer also declares that he has duly trained the user to operate the machine, with the help of the instruction manual.

The technician declares that he has attached the printer ticket to this form along with the warranty form, duly filled out in all parts.

The above mentioned documents must be immediately forwarded to the manufacturer.

Notes and/or considerations .....

.....

.....

.....

Installer's signature and date

.....

WARRANTY CERTIFICATE

This document certifies that the appliance has been correctly manufactured.
The appliance will be repaired if it operates in a faulty way during the warranty period owing to manufacturing defects, the manufacturer's judgement over such matters being final.
The sterilizing chamber is covered by guarantee for a period of 60 (sixty) months from the date of purchase. This date shall be testified by the enclosed coupon, which must be filled out, duly stamped and signed by the technician who took part in the installation course.
The sales invoice or consignment note shall bear witness in the event of disputes.
The electrical, electronic parts and nuts and bolts are guaranteed for a period of 24 months.
The warranty covers the sole replacement or repair of those parts recognized as possessing manufacturing defects, travel and call costs excluded and the normally expendable components.
Replaced parts shall be returned free port. The ordering party shall be charged for any part that is not returned.
All appliances returned for repairs shall only be sent to us free port after authorization and shall be adequately packed, with the sender's name, address and claimed defect clearly indicated.
The appliance remains the property of the seller until is has been fully paid for by the purchaser.

THE WARRANTY SHALL BECOME VOID:

1. If the appliance has been repaired, modified or tampered with by the purchaser or by unauthorized third parties.
2. If the purchaser fails to contact the seller or authorized technical center.
3. 18 months from the date of our consignment note.
4. If the customer delays or suspends payments.
5. If the appliance has been damaged by exposure to fire, spilt liquids, natural disasters, has been dropped or damaged by causes that are not ascribable to manufacturing defects.
6. When the warranty form has not been duly filled out, signed and returned to the manufacturer within the established time.
7. If the customer uses the appliance improperly, fails to carry out the routine maintenance operations or services the appliance in a neglectful way.

WARRANTY CERTIFICATE

APPLIANCE:

The undersigned reseller certifies that the warranty has been examined and
certifies that the appliance has been consigned and installed in compliance with the instructions given

by the manufacturer on:……..

By Mr. ……

Address ……..

ZIP Code …… City ……..

1 – FOR THE PURCHASER

…….. TECHNICAL INSTALLER SIGNATURE AND STAMP*	reverberi Via Don Luigi Sturzo, 6 42021 BARCO (Reggio Emilia) ITALY

✂ ✂

THIS PART OF THE CERTIFICATE MUST BE SENT BACK BY REGISTERED LETTER WITHIN 8 DAYS FROM THE DATE OF PURCHASE

WARRANTY CERTIFICATE

TO BE RETURNED SIGNED AND STAMPED

APPLIANCE: ATTACCARE QUI L'ETICHETTA

The undersigned reseller certifies that the warranty has been examined and
certifies that the appliance has been consigned and installed in compliance with the instructions given

by the manufacturer on:……..

By Mr. ……

Address ……..

ZIP Code …… City …… Buyer signature……

2 –FOR THE MANUFACTURER

…….. RESELLER'S SIGNATURE AND STAMP	reverberi Via Don Luigi Sturzo, 6 42021 BARCO (Reggio Emilia) ITALY

* The technical installer must be authorized by the building factory.

Via Don Luigi Sturzo nº 6
42021 BARCO (Reggio Emilia)
Tel. +39 – 0522 - 875159 / 875195
Fax +39 – 0522 - 875736 / 875579
ITALIA

MEDICAL DIVISION

ISO 9001 – EN 13485

CERTIFICATE N. 9120.REV1 — CERTIF. N. 9124.REV2 — REGISTRATION NUMBER: IT - 8604

DICHIARAZIONE DI CONFORMITÀ**. DECLARATION DE CONFORMITÈ.**
DECLARATION OF CONFORMITY.
DECLARACION DE CONFORMIDAD. KONFORMITATSERKLARUNG.

STERILIZZATRICE A VAPORE. MACHINE POUR STERILISER A VAPEUR. STEAM STERILIZER MACHINE. ESTERILIZADORAS DE VAPOR. DAMPFSTERILISATOREN.

Mod:	*Art.*
M9010/36/2	***PRATIKA S16***
M9010/38	***PRATIKA B16***
M9010/41	***PRATIKA B20***

CE 0051

La Reverberi s.r.l. dichiara sotto la propria responsabilità che i prodotti elencati sono conformi alle norme:

La maison Reverberi s.r.l. déclare sous sa responsabilité que les produit enumeres sont conformes aux directives:

The company Reverberi s.r.l. declare under own exclusive responsability that the product listed are in conformity with the normatives:

Reverberi s.r.l. declara bajo su propia responsabilidad que los productos mencionados estan conformes a las normas siguientes:

Reverberi s.r.l. erklart unter seiner cigenen verantwortung, daB die aufgelisteten produkte den vorschriften:

EN 61010-1 : 1993 + A2 : 1995, EN 61010-2-041 : 1996,
EN 61000-3-2 : 1995 + A1 : 1998 + A2 : 1998,
EN 60555-3 : 1987+A1 : 1991, EN 55011 : 1998, EN 50082-2 : 1995,
EN 97/23/CE, DDM 93/42 CE, EN94/62CE.

BARCO (RE)
03-01-2007

……..
Pres. (REVERBERI ARNALDO)